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THE PLANT DISEASE REPORTER

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THE OFFICE OF MYCOLOGY AND DISEASE SURVEY

Volume XII **Number 2**

June 1, 1928

BUREAU OF PLANT INDUSTRY

UNITED STATES DEPARTMENT OF AGRICULTURE

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EARLY REPORTS OF STEM RUST OF WHEAT (PUCCINIA GRAMINIS)

California: While rust has been found as usual in nearly every area there will be no epidemic of stem rust anywhere in the state. (Mackie, May 18)

Texas: Stem rust apparently overwintered here in some abundance. Enclosed you will find a sample of stem rust which I collected on winter wheat here yesterday. I could find only a trace in the spring wheats. (C. O. Johnston, May 20)

NOTES ON LEAF RUST OF WHEAT (PUCCINIA TRITICINA)

Virginia: On May 7 I inspected cereal rust plots at Arlington Farm and found traces of Puccinia tritici on lower leaves of "1915 B" selection. Many of the leaves were half-dead and some of the uredinia showed unmistakable evidence of having survived the winter. Secondary infections had evidently been originated by spores from these old pustules. Many of these more recent uredinia are to be found on lateral shoots or "suckers" of this season's growth.

On May 11 I again visited the plots following a rainfall of 1.46 inches and a day of abnormal warm weather. Still, no more than a trace of leaf rust could be found and none at all on the vast majority of plants. Abnormally cool weather is retarding rust development.

May 14 - again visited plots. Found no more than a scant trace.

May 15 - weather warm and humid, wind 5- Sw. Leaf rust still very scarce - barest trace. Nights too cold for infection. (Humphrey, May 17)

Texas, Oklahoma, Kansas: The rust situation in the southwestern Great Plains area has not shown any very marked changes in the past two weeks. Leaf rust had developed to a considable extent at Denton, Texas, and Stillwater, Oklahoma, but did not appear in experimental plats at Harper in southern Kansas until May 2. On May 7, Mr. Patton, who is in charge of the plots at that station, wrote me that leaf rust seemed to have developed almost over night and was easily found in many varieties.

I was able to find a bare trace of leaf rust at the agronomy farm here on May 9. Only by careful search, however, was a uredinium found here and there, and then only on old leaves. There still is practically no leaf rust in my nursery and even that resulting from artificial inoculation is not spreading to any extent. (C. O. Johnston, Cereal Courier 20, May 20)

REPORT ON PUCCINIA GLUMARUM FROM CALIFORNIA

California: Heavy infection of stripe rust of wheat (Puccinia glumarum) has been observed on some early Indian varieties. Some of the hybrid wheats also seem to be infected. (F. N. Briggs, Cereal Courier 20, May 10)

CORN SEED TREATMENT

According to J. R. Holbert in the Cereal Courier, May 20, the Fink Bros. Seed Company is collecting a large number of samples of seed corn from the planter boxes throughout central Illinois with the idea of obtaining more definite information concerning the quality of seed actually planted. They expect to use about 200 of these samples in making up a composite of "farmers' seed" which will be used in a seed treatment experiment. Holbert states that the men who have been taking these samples estimate that

> "Over 50 per cent of the seed corn throughout central Illinois has been given a seed treatment. Mr. Fuller, manager of approximately 9,000 acres in McLean County has estimated that 90 per cent of the seed corn in this county has been treated."

OAT RUSTS IN TEXAS

"Puccinia graminis present in moderate amounts. Puccinia coronata - very heavy infection but all in telial stage now." (C. O. Johnston, May 20)

SCALD (RHYNCHOSPORIUM) DAMAGES BARLEY IN SACRAMENTO VALLEY

California: I have just made a cereal disease survey of practically the whole of the state of California. I find that the barley crop throughout the whole of the Sacramento Valley is very severely damaged by scald (Rhynchosporium). The damage extends to all fields without exception where early plantings have been made. The late plantings are light in yield and the quality of the crop poor. This scald attack will cause a severe loss to the exporter in regard to the quality of the barley. The best fields I found were irrigated fields in the San Joaquin Valley. (Mackie, May 18)

NOTE ON THE LEAF RUST OF BARLEY (PUCCINIA ANOMALA)

Virginia: Found Puccinia anomala on Tennessee 3546 and Wisconsin Winter at Arlington Farm on May 15. Searched for leaf rust on Tennessee Hull-less and found none. (Humphrey, May 17)

APPLE SCAB

St. Catherines, Canada: Apples are in the pink stage. Some early varieties such as Astrachan are now in partial bloom. The pink spray on apples was generally applied May 14 - 16th, very opportunely before the heavy showers of May 17 and 18th. Ascospore discharge was noted to be quite heavy during these showers and scab infection may be looked for. (G. C. Chamberlain, New York State Col. Agr. Depts. Pl. Path. & Entom. Weekley News Letter, May 21)

Pennsylvania: As a result of the abnormally early shooting of the spores, apple scab has started to show up on the apple leaves about two weeks earlier than usual. Scab spots in most years are first found on apple leaves 7 to 14 days after petal fall but this year they showed up 3 to 7 days before petal fall.

Scab infection spots were first observed on apple leaves on May 10 in Philadelphia County. On May 15, the

following percentages of leaves were infected with scab in an unsprayed orchard in Bucks County.

Smokehouse - 15 per cent scabby leaves
Stayman - 38 per cent scabby leaves

Scab in moderately small amounts observed in Lehigh and Northampton on May 16. Carbon and Schuylkill on May 17, Columbia and Luzerne on May 18, and Perry on May 19.

In Columbia County 56 per cent of the leaves and 66 per cent of the blossom stems of a crabapple tree were infected. The blossom stem infection was causing the blossoms to wither and drop off.

The only apple scab so far observed has been either on unsprayed trees or on the lower leaves of low hanging limbs where the spray gun missed. No apple scab has been found on properly sprayed trees to date. (Kirby, May 19)

Virginia: According to ascospore ejction record, we ought to have the initial lesions of scab appearing now but we have been unable to find any scab. (Schneiderhan, May 12)

Illinois: Leaves containing perithecia brought into the laboratory on April 12 contain mature ascospores which discharged immediately. At the time the buds of most of the varieties of apples were not open. The tips of the leaves of a few crabapples in the variety orchard were showing. Scab on the leaves of the crabapple in this orchard showed on May 2. Very little scab is present in the state due to excessive dry weather in most sections. It is probable that scab will not be a problem this year in the main apple growing sections of the state. (H. W. Anderson, May 15)

APPLE AND PEAR DISEASES IN WASHINGTON

The following reports on the occurrence of apple and pear diseases in Washington this year were sent in by D. F. Fisher of the Office of Fruit Diseases.

"Powdery mildew (Podosphaera leucotricha) is more prevalent than usual throughout central Washington. Very bad in the Okanogan Valley on Jonathan and Spitzenburg. Prevalent throughout the Wenatchee-Okanogan districts. Growers failed to spray in 'pink'. Serious on D'Anjou pears, the only variety observed to be seriously affected, and it is worst where planted among susceptible varieties of apples from which the disease undoubtedly spread. Rainfall more than average.

"Cankers (Cytospora sp.) at basal leaf buds, pruning cuts, and crotches, girdling young trees and branches, serious in one locality, Douglas County. Found on Northern Spy, Delicious, and Winesap trees. While infection at leaf buds indicates a strictly parasitic nature the trees have been devitalized through drouth and winter injury in the past and no doubt this is a predisposing factor."

BACTERIAL SPOT (BACTERIUM PRUNI) DAMAGES TWO SOUTH CAROLINA PEACH ORCHARDS

"On Tuesday, May 22, I was called upon to visit two commercial peach orchards near Cheraw, South Carolina, one of 17,000 trees and one of about 12,000 trees. These orchards are not of the neglected type but are owned by very progressive men who are attempting to keep them in a high state of production. The trouble was due to bacteriosis, and I saw several blocks of a few hundred trees suffering considerable defoliation. I have never seen quite so much spotting of the fruit from this cause before, as fully 20 per cent of the fruit on the considerably diseased trees was showing from one to twenty spots. I brought back a few young twigs with cankers. Those were found to be teeming with bacteria. The twig cankers, however, were rare." (G. M. Armstrong, May 26)

FILBERT BLIGHT REPORTED FROM ILLINOIS

A specimen of filbert attacked by Cryptosporella anomala was sent in by H. W. Anderson who stated that it was taken from a rather extensive planting near Marion, May 5. The disease has apparently not been reported from Illinois before.